

LISTING OF CLAIMS:

Claims 1-2 canceled.

1 3. (previously amended) A gear-reduction device for measuring and
2 transmitting rotary and swivel movements, comprising a plurality of wheel/pinion pairs,
3 each wheel/pinion pair having a gear axle, a gear wheel and a pinion gear, the gear
4 wheel and the pinion gear being rigidly connected to the gear axle; said gear-
5 reduction device being adapted to be coupled to a rotary object that moves in a plane
6 of rotation and whose movement is to be measured within a measuring range; and
7 said gear-reduction device producing an output motion that is reduced in relation to
8 the movement of the rotary object, thereby expanding the measuring range; wherein
9 the gear wheels of the different wheel/pinion pairs lie in different gear-
10 wheel planes, at least a part of the gear-wheel planes being parallel to each other and
11 inclined in relation to the plane of rotation of the rotary object;
12 the gear wheels of the different wheel/pinion pairs are of equal diameter;
13 the wheel/pinion pairs follow each other in a sequence where the pinion
14 gear of each wheel/pinion pair is engaged in the gear wheel of the next following
15 wheel/pinion pair;
16 the gear wheel of the first wheel/pinion pair in the sequence is an input
17 wheel, being positively engaged and driven by the rotary object;
18 the gear wheel of the last wheel/pinion pair in the sequence is an output
19 wheel, the pinion of the last wheel/pinion pair being adapted to positively engage and
20 drive an optical angle-measuring device adapted for rotary swivel motion in a swivel-

18 wheel, being positively engaged and driven by the rotary object;
19 the gear wheel of the last wheel/pinion pair in the sequence is an output
20 wheel, the pinion of the last wheel/pinion pair being adapted to positively engage and
21 drive an optical angle-measuring device adapted for rotary swivel motion in a swivel-
22 motion plane;
23 the gear-wheel plane of the output wheel is parallel to the swivel-motion
24 plane of the optical angle-measuring device; and
25 all gear-wheel planes are parallel to each other and inclined at an oblique
26 angle in relation to the plane of rotation of the rotary object.

1 5. (previously amended) The gear-reduction device of claim 3, wherein
2 the input wheel has an input shaft and is kinematically coupled to a driving unit, and
3 the output wheel has a central output shaft adapted to transmit movement to a driven
4 device.

1 6. (original) The gear-reduction device of claim 5, further comprising a
2 base plate, a cover plate, and a plurality of rotary bearings mounted in the base plate
3 and the cover plate, wherein at least the input shaft and the central output shaft run in
4 the rotary bearings and wherein further the gear-reduction device is adapted to be
5 flange-mounted on the driving unit and to form a unitary module with the driving unit.

1 7. (new) The gear-reduction device of claim 4, wherein the input wheel
2 has an input shaft and is kinematically coupled to a driving unit, and the output wheel

3 has a central output shaft adapted to transmit movement to a driven device.

1 8. (new) The gear-reduction device of claim 7, further comprising a base
2 plate, a cover plate, and a plurality of rotary bearings mounted in the base plate and
3 the cover plate, wherein at least the input shaft and the central output shaft run in the
4 rotary bearings and wherein further the gear-reduction device is adapted to be flange-
5 mounted on the driving unit and to form a unitary module with the driving unit.